

PATENT ABSTRACTS OF JAPAN

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(54) TELETEXT RECEIVER**(57)Abstract:**

PURPOSE: To edit data of teletext television program information, to generate a television program list and to make video recording reservation.

CONSTITUTION: Television program data are extracted from a teletext signal of each channel and stored in a data memory 10 whose area is set for each weekday and each time zone and the data are revised every day. A television program list for a desired weekday/time zone is read from the data memory 10 by key operation of a remote controller 3 and displayed on a monitor 2, and program data selected by a cursor are stored by a reservation memory 11 for video recording reservation.

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CLAIMS

[Claim(s)]

[Claim 1] The data sampling section which extracts a teletext signal from the inputted television broadcasting signal, In the teletext receiver equipped with the control section which controls storage of the received data which this data sampling section outputs, retrieval, read-out, etc., and the display and control section which changes these read-out data into the signal of a display on a television screen The memory which registered the teletext program number of TV program information etc., and the data memory which extracts TV program information from the teletext of each channel by this program number, and memorizes TV program data, The reservation memory which memorizes the image transcription reservation program data chosen from the data of this data memory storage, The teletext receiver characterized by coming to provide the clock section which outputs the data of a date and time of day, the input section which directs the display of TV program data, selection, image transcription reservation, etc., and the VTR control section which outputs a control signal to VTR of connection.

[Claim 2] Said data memory sets up a memory area for every time zone of every day of the week and this day of the week, and memorizes the TV program data of each channel to the field of a response, respectively. When the conversion output of the data chosen from the data of this data memory storage in the key stroke of said input section is carried out, to a status signal **, The teletext receiver according to claim 1 which searches the TV program data which indicated by cursor from said data memory, memorizes these TV program data in said reservation memory, and was made to carry out image transcription reservation of said VTR.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to what memorizes all the TV program data of each channel in memory using the TV program information by the teletext, displays these TV program data on monitor display with respect to a teletext receiver, and carries out image transcription reservation of VTR.

[0002]

[Description of the Prior Art] Conventionally, image transcription reservation with VTR of a TV program selected the program to record on videotape by the newspaper TV program column etc., it inputs data, such as a channel of reservation, a date, and initiation, end time of an image transcription, having a dialog with the display of the body of VTR, or the screen of television, and was actuation very troublesome to ordinary viewers. Moreover, the data of image transcription reservation are expressed with a bar code as a measure for such a problem, there is a method which reads it with a scanner and was made to carry out reservation setting out, and the bar code is carried and used at the TV program informational magazine etc. However, generally it had not spread from stopping at printing of a part of program, since a fixed tooth space is required for the display of a bar code, and needing the scanner of dedication, and becoming cost high etc. It was much more serious to wind the page of an informational magazine that especially the image transcription reservation over several days has no choice but to TV program cause, to have made a note of the program of choice, and to have carried out reservation setting out.

[0003] On the other hand, service of the information on the news of various kinds [teletext], a weather report, a share, etc., a complement of the TV program by a title supermarket etc., etc. is offered by each channel now. This teletext is a system which superimposes and broadcasts the data of an alphabetic character and a graphic form to a part of vertical-retrace-line period of a television video signal, and data, such as an alphabetic character, an alphabetic character, and a notation, are coded and sent. Therefore, in the teletext, if specific alphabetic character and figure of the display screen of an alphabetic signal are specified by cursor display etc., it has the fundamental conditions that the code of the appointed alphabetic character and figure is decoded with a teletext receiver, and grasp discernment of the content can be performed. That is, if service of the TV program information by the teletext is offered, discernment by receivers, such as a channel of a program, a date of broadcast, and time of day of initiation and termination, will be attained using this TV program data.

[0004]

[Problem(s) to be Solved by the Invention] This invention was made in view of such a point, and extracts the program of TV program information from the teletext of each

channel. Edit the TV program data of each channel into a race card for every time zone of each day of the week, and it accumulates in data memory. Keys, such as remote control, are operated, the program data of a desired day of the week and time zone are read, it displays on monitor display, the TV program data which indicated by cursor are memorized in the memory for image transcription reservation, and the teletext receiver which was made to carry out image transcription reservation of VTR is offered.

[0005]

[Means for Solving the Problem] The data sampling section which extracts a teletext signal from the inputted television broadcasting signal in order that this invention may solve an above-mentioned technical problem, In the teletext receiver equipped with the control section which controls storage of the received data which this data sampling section outputs, retrieval, read-out, etc., and the display and control section which changes these read-out data into the signal of a display on a television screen The memory which registered the teletext program number of TV program information etc., and the data memory which extracts TV program information from the teletext of each channel by this program number, and memorizes TV program data, The reservation memory which memorizes the image transcription reservation program data chosen from the data of this data memory storage, The teletext receiver which comes to provide the clock section which outputs the data of a date and time of day, the input section which directs the display of TV program data, selection, image transcription reservation, etc., and the VTR control section which outputs a control signal to VTR of connection is offered.

[0006]

[Function] Since it constituted as mentioned above, in the teletext receiver by this invention, the program number of registration extracts the program of TV program information from the teletext of each channel beforehand, and the extracted TV program data are memorized to data memory. A memory area is set to this data memory for every time zone of every day of the week and this day of the week, all TV program data are edited into a race card, and are memorized, and the data of storage are updated to predetermined time every day. The TV program data of a desired day of the week and time zone are chosen in key strokes, such as remote control, and it displays on monitor display, and the TV program data of a cursor display are memorized in memory, image transcription reservation is carried out, and VTR of connection is controlled based on reservation data.

[0007]

[Example] Hereafter, based on a drawing, the example of the teletext receiver by this invention is explained to a detail. Drawing 1 is the important section block diagram of one example of the teletext receiver by this invention. In drawing 1, the monitor with which 1 displays the body of a teletext receiver and 2 displays the data of reception, the remote control whose 3 outputs the remote control signal of a response in a

user's key stroke, and 4 are VTRs of connection. 5 is an antenna, 6 is a tuner, the television broadcasting signal of the channel which the channel selection section 7 directed is amplified and detected, and a conversion output is carried out at a video signal. 8 is the data sampling section and outputs the alphabetic signal which separated and carried out the error correction of the teletext signal of superposition to the predetermined location of a vertical-retrace-line period from this video signal. The data memory of the TV program which memorizes the TV program data from the teletext signal of all the channels that the work piece RAM with which 9 carries out the temporary storage of the alphabetic signal of data sampling section 7 output, and 10 specified, The reservation memory 11 remembers the TV program data of image transcription reservation to be, the character generator with which 12 decrypts an alphabetic signal to the alphabetic data of the screen display of a response by making the code of an identical text character signal into the address, The display and control section which carries out the conversion output of the alphabetic data with which 13 was decrypted at the status signal displayed on the screen of a monitor 2, The memory for registration which registers data, such as a number of the television channel which 14 receives, and a teletext program number of TV program information, The clock section to which 15 outputs the data of a date and time of day, the input section which carries out reception detection of the remote control signal into which 16 is inputted from remote control 3, and 17 are VTR control sections which output the control signal of the predetermined format of directing an image transcription based on the image transcription reservation program data of memory 11 storage to VTR4. 18 is CPU (central processing unit), it connects with said each part through a bus line 19, and control of a store, retrieval, and read-out of data etc. controls each part of relation according to the program loaded to the program ROM 20.

[0008] Next, actuation of the teletext receiver by constituted this invention is explained like ****. First, if the TV program information by the teletext is possible, in order that it may close grasp of a TV program, and discernment with a teletext receiver, Predetermined screen-display criteria constitute TV program data, such as a station name, a date, a title of a program, and time of day of initiation and termination, from a character code or an identification code at least. The program number of a teletext shall be set up at each of each day of the week as part on the 1st 1 program, and the TV program data for the 1 week containing that day shall be broadcast from each channel. Drawing 2 is an example of the display screen. Moreover, the data of the program number on Saturday are beforehand registered into the memory 14 for registration from Sunday mentioned above, respectively, and the channel number for reception is registered into the memory 14 for the said registration in the presetting of the channel wishing viewing and listening performed in case a user is this machine installation. Moreover, the data memory 10 which memorizes TV program data sets up the TV program data storage field beforehand for every time zone of every day of the week and this day of the week, as shown in

drawing 3 . Drawing 4 is an example of the display screen of the TV program data of data memory 10 storage.

[0009] Next, the flow chart of drawing 5 explains actuation of updating and the store of the TV program data of data memory 10 storage. CPU18 will investigate whether it is under [viewing-and-listening] ***** , if the data of the time of day of clock section 15 output become the setup time of updating and a store (it abbreviates to ST step 1, YES, and henceforth), confirms that it is not under viewing and listening, makes it updating (ST2, NO) / write-in mode (ST3), and performs the control procedure after ST4. If updating and the store in now, for example, Sunday, are made into an example, it will be data which the part on the previous day, a part for i.e., Saturday, should update, therefore a day of the week the previous day and Saturday will be distinguished based on the data of the date of clock section 15 output, and the program number of a response will be read from the memory 14 for registration on Saturday (ST4). And from the memory 14 for registration, the channel number first for reception is read, it directs in the channel selection section 7, a conversion output is carried out at the channel select signal of this channel, a tuner 6 is changed to this channel (ST5), and it waits for the input of the alphabetic signal from the data sampling section 8. A program data header is discriminated from a series of alphabetic signals of an input, the program number of a response is compared on the program number data from this program data header, and said Saturday, and the temporary storage of the data of all the pages of this program is carried out to a work piece RAM 9 one by one by coincidence (ST6). Next, the data of storing to a work piece RAM 9 decode the numeric code which shows the day of the week by the program number, and the broadcast start time of this data text, and they are written in the predetermined storage region of data memory 10, i.e., the time zone when Saturday corresponds, carrying out renewal of sequential of the old data. On the occasion of this writing, it writes in the beginning of each day of the week as a data header and a teletext signal of the predetermined format which subsequently displays the **** display screen which this party eye adds data, such as a channel number, to a header and the TV program data text, respectively, and is shown in drawing 4 . After updating and the store of all the data of the channel first for reception are completed (ST7), it changes to the following object channel one by one, and above-mentioned updating and store are performed, respectively (ST8, NO, ST9-ST7). Updating and the store of the last object channel are ended, and updating (ST8 and YES) / write-in mode is canceled. In addition, although it was made to perform updating and the store of the data for a day on the previous day, you may make it update and write in the data of all 7 Japanese parts from every day and Sunday to Saturday by the data of the TV program information on broadcast in this example on the day.

[0010] Drawing 6 is a flow chart which shows actuation of image transcription reservation. It **/page "" page ["reservation" and] Winds in remote control 3, and it is equipped with actuation keys, such as "cursor" migration, "setting out", and

"termination." If the preprogrammed key of remote control 3 is operated now, the remote control signal by this actuation will be received in the input section 16. CPU18 detects the signal of an input, makes it reservation mode, first, it distinguishes a day of the week on the day based on the data of the date of clock section 15 output, searches data memory 10, reads this day of the week and 1-page data, and outputs a status signal to a monitor 2 through a display and control section 13 (ST11).

"**/page" If it winds and there are waiting (ST12) and this input about the input of a key (ST12, YES), the data of the appointed day of the week and page will be read from data memory 10, and a conversion output will be carried out at a status signal (ST13), for example, it will display with a monitor 2 like drawing 4. In this drawing, cursor is displayed by changing the background color of a display position etc. Next, if there are waiting (ST14) and this input about the input of a cursor key (ST14, YES), according to assignment, display cursor will be moved to the upper and lower sides of a screen (ST15). Subsequently, the input of a setting-out key is detected, the TV program data of said (ST16, YES) cursor display are searched and read from data memory 10, and these TV program data are written in the reservation memory 11, and are memorized (ST17). If the data of storage are constituted from data, such as a channel number of a reservation program, a date of broadcast, and initiation, end time, at least on the occasion of this writing and it memorizes by the character code signal in which a screen display is possible including a program title, check and management of a reservation program can be performed with a monitor 2. Actuation of above-mentioned program reservation is repeated, the input of an end key is detected, and reservation (ST18, YES) mode is canceled.

[0011] CPU18 checks the data of the reservation program data of reservation memory 11 storage mentioned above, i.e., a channel, a date, and initiation and end time, and the date of clock section 15 output and the data of time of day, sends them out to VTR4 of connection of the control signal of a predetermined format by the coincidence, and directs the image transcription of a reservation program. Sending out of the control signal to VTR4 may be based on a signal cable, and may be performed using infrared radiation etc.

[0012] The television built-in which includes in the interior of a television set and carries out the common activity of the tuner 6 is sufficient as said body 1 of a teletext receiver, and it may also be an adapter mold. Moreover, it can be used for a television set, building in VTR and connecting.

[0013]

[Effect of the Invention] As explained above, in the teletext receiver by this invention, the program of TV program information is extracted from the teletext of each channel, it edits into the race card which synthesized the TV program of each broadcasting station for every day of the week and every time zone, the data for 1 week are memorized, the day of the week of arbitration and its page are chosen in the key stroke of remote control, and it displays on the monitor display of connection.

Therefore, not being based on the TV program column of a newspaper and an informational magazine also checks the program information on each channel with direct monitor display, by cursor actuation, the program of hope can be chosen and image transcription reservation can be carried out. Furthermore, management of a reservation program etc. can be performed in monitor display.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing one example of the teletext receiver by this invention.

[Drawing 2] It is an example of the display screen of the TV program information by the teletext.

[Drawing 3] It is the explanatory view of the data memory which memorizes TV program data.

[Drawing 4] It is an example of the display screen of the TV program data of data memory storage.

[Drawing 5] It is the flow chart which shows actuation of updating and the store of the TV program data of data memory storage.

[Drawing 6] It is the flow chart which shows actuation of image transcription reservation.

[Description of Notations]

1 Body of Teletext Receiver

2 Monitor

3 Remote Control

4 VTR

5 Antenna

6 Tuner

7 Channel Selection Section

8 Sampling Section

9 Work Piece RAM

10 Data Memory

11 Reservation Memory

12 Character Generator

13 Display and Control Section

14 Memory for Registration

15 Clock Section

16 Input Section

17 VTR Control Section

18 CPU

19 Bus Line

20 Program ROM
